



PMcL/3167D5/SA1 Response

15th March 2017

**NEW ROAD DEVELOPMENT
A259 NEW ROAD, RUSTINGTON,
LITTLEHAMPTON**

S278 HIGHWAY ACCESS WORKS

**Road Safety Audit Designer's Response
STAGE 1**

This Road Safety Audit Response Report has been prepared in response to the Stage 1 Road Safety Audit undertaken by Jamie Fenning and Angharad Bradley of Fenley Partnership dated January 2017 (Ref; RSA-16-069) on the amended highway access works associated with the A259 New Road Development, Rustington, Littlehampton. For ease of reference this response has repeated in italics the issues raised within the safety audit.

Audit No. A.1 GENERAL

A.1.1

Problem - Inadequate weaving length

Accident Type - Side swipes / rear end shunts

Location - East of proposed deceleration lane

It was apparent from the site visit, that the recently constructed acceleration lane associated with the adjacent development, to the east, merges with the A259 channel line approximately 40 metres to the east of the proposed deceleration lane. Therefore, vehicles exiting the adjacent development will be in conflict with vehicles entering the proposed development which are likely to be changing lanes simultaneously. This may result in side swipes and shunts along the recently constructed acceleration lane where vehicles are not able to merge onto the A259 from the adjacent development

Recommendation: It is recommended that the weaving length is increased appropriately.

RESPONSE: Traffic leaving the adjacent development will have to give way to traffic travelling along the nearside lane of the A259. Due to site constraints, the entry radius to the site is restricted to 20 metres. Figure 7/12 of TD42/95 (extract below) shows the



required length of the deceleration lane as dimension 'a'. At the end of the deceleration lane Figure 7/12 indicates a give way triangle indicating that the entry radius into the site is not a speed reducing feature as the radius is beyond the give way lines:

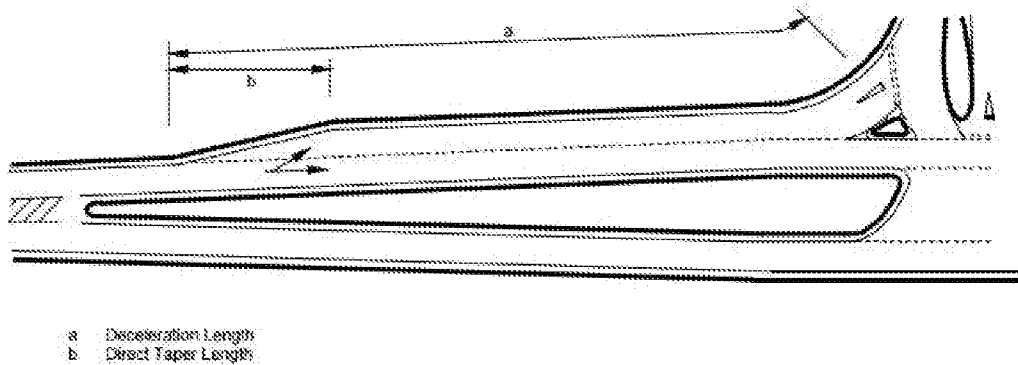


Figure 7/12 : Major/Minor Priority Junction with Nearside Auxiliary Lane (para 7.56)

The 'weaving length', i.e. the distance between the point at which the adjacent site's merge lane joins the A259 New Road and the start of the taper for the proposed development has been increased to 90 metres. We have amended the deceleration length to accord with a required distance 'a' of 110 metres for a Design Speed of 120kph as specified in Table 7/5b of TD42/95 (extract below):

Design Speed (kph)	Up Gradient		Down Gradient	
	0-4%	Above 4%	0-4%	Above 4%
50	25	25	25	25
60	25	25	25	40
70	40	25	40	55
85	55	40	55	80
100	80	55	80	110
120	110	80	110	150

Table 7/5b: Deceleration Length (m) for Dual Carriageways (paras 7.40 and 7.55)

Additional 'SLOW' road markings and advanced mini roundabout warning signs are retained in the design to warn approaching motorists of the on-site roundabout.



The inclusion of advanced direction signs as proposed for Problem A.5.2 will mitigate 'side swipe' concerns as motorists will be made aware of the location of both accesses and will be able to manoeuvre to the nearside lane at the appropriate time in advance of the proposed access.

The inclusion of an auxiliary lane rather than a taper lane will avoid the need for motorists entering the site to decelerate on the A259 itself and will address concerns regarding rear-end shunts from motorists leaving the adjacent site. This is confirmed by Para 7.56 of TD42/95 which states "*The provision of an auxiliary lane as shown in Fig 7/12, would allow turning traffic to move off the mainline prior to any deceleration*".

A.1.2

Problem - No Vehicle Restraints provided

Accident Type - Vehicle NMU collision

Location - Adjacent to proposed footway / cycleway link

The scheme drawings identify that edging is to be provided alongside the proposed footway / cycleway link to the east of the deceleration lane but no kerbing to provide a level difference. Therefore, pedestrians and cyclists travelling along the footway will be at the same level just 1 metre from the edge of carriageway raising the risk of vehicles encroaching the verge and colliding with non-motorised users.

Recommendation: It is recommended that kerbing is provided similar to that on the adjacent acceleration lane.

RESPONSE: A full height splay kerb will be provided adjacent to the proposed shared footway/cycleway as shown on the amended section on **Drawing No. REDW-3167-130-Revision A.**

Audit No. A.4 NON-MOTORISED USER PROVISION

A.4.1

Problem - No Vehicle Restraints provided

Accident Type - Vehicle NMU collision

Location - Adjacent to proposed footway / cycleway link

The Cross Sections illustrated on the scheme drawings, identify that a retaining wall and 1 metre rail are to be provided to ensure that NMU's do not fall to the south into the adjacent site,



however no Vehicle Restraints are illustrated. It is noted that Vehicle Restraints are to be provided alongside the development but not alongside the proposed footway / cycleway link.

Recommendation: It is recommended that a Vehicle Restraint System similar to the recently constructed measure, is provided.

RESPONSE: Note 2 on **Drawing No. REDW-3167-131** confirms that the detailed design will be accompanied by a VRS alongside the development and in the central reserve, including where appropriate a RRRAP. **Drawing No. REDW-3167-130-Revision A** now includes a note to this effect and the sections show an indicative safety fence.

A.4.2

Problem - No dropped kerb crossing points

Accident Type - Pedestrian trip / cyclists fall

Location - Footway / cycleway through the site

The scheme drawings do not identify any directional road signage and therefore it is possible that vehicles intending to access the proposed retail unit and public house, will manoeuvre as if to access the adjacent recently constructed development and change direction at the last minute when the driver becomes aware of the access to the proposed retail unit. Last minute lane changes could result in vehicle.

RESPONSE: Shared tactile paved pedestrian/cycleway dropped kerb crossings have been added to **Drawing No. REDW-3167-131**.

Audit No. A.5 ROAD MARKING, SIGNS, LIGHTING, DRAINAGE AND SERVICES

A.5.1

A.5.1

Problem – Faded road markings

Accident Type – Vehicle collisions

Location – Alongside proposed footway / cycleway

The A259 road markings alongside the proposed footway / cycleway appear to be faded. This is an existing issue, however observations show that the recently constructed scheme has re-laid markings adjacent to the works. There will therefore be a gap in the markings which could confuse drivers



Recommendation: It is recommended that the A259 road markings are re-laid alongside the entire scheme.

RESPONSE: A note has been added to **Drawing No. REDW-3167-131** to confirm that existing A259 road markings along frontage of the new highway works shall be refreshed as part of the detailed design.

A.5.2

Problem – No directional signage proposed

Accident Type – Vehicle collisions

Location – East of proposed development

The scheme drawings do not identify any directional road signage and therefore it is possible that vehicles intending to access the proposed retail unit and public house, will manoeuvre as if to access the adjacent recently constructed development and change direction at the last minute when the driver becomes aware of the access to the proposed retail unit. Last minute lane changes could result in vehicle.

Recommendation: It is recommended that appropriate signage is installed to inform approaching drivers of the amenities off each access.

RESPONSE: A combined advance direction sign (ADS) for both accesses will be included in the detailed design which will identify the presence of 2 accesses and their respective uses. The proposed signage will be located to the east of the adjacent development. Note 4 has been added to **Drawing No. REDW-3167-131**.

A.5.3

Problem – No drainage provided

Accident Type – Vehicle loss of control

Location – A259 Adjacent to works

It is clear that surface water from the westbound carriageway of the A259 currently falls to the soft verge to the south. The proposals to provide full height kerbs alongside the A259 will prevent surface water from draining and could result in ponding.

Recommendation: It is recommended that a surface water drainage system is provided.

RESPONSE: The detailed design of the highway works shall include proposals for a full positive drainage system for the works. It is the intention of the Applicant to offer for adoption



as public highway the site entrance as far as and including the mini roundabout. A positive drainage system will be proposed to cater for this complete area discharging to the adjacent stream.

A.5.4

Problem – Service covers present

Accident Type – Vehicle loss of control

Location – South verge of A259

Recommendation: It is recommended to adjust service covers accordingly.

RESPONSE: The detailed design of the highway works shall identify all service covers affected by the works and will include the diversion of services as agreed with the service companies or will lower service cover levels to the appropriate level as required by the detailed design.